HOH RIVER CED RETROFIT (MP 175.6-176)

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INTRODUCTION

This Hoh River retrofit site is along U.S. Highway (US 101) 101 just south of Forks between mileposts (MP) 175.6 and 176 and one mile upriver of the already constructed retrofit site. US 101 is a two-lane route and the only route around the Olympic Peninsula capable of carrying commercial traffic. It is of particular importance as a transit route for consumer goods, tourist traffic, and timber products.

THE CED PROBLEM

In the vicinity of the CED retrofit site, US 101 is aligned generally parallel with the Hoh River valley in an area where the river has a natural tendency to migrate laterally across a wide, alluvial floodplain. This retrofit site is located on the left bank near river mile 13.5. Bank erosion is moving upstream of a major riprap revetment in association with a point bar that is developing upstream on the opposite side of the river. The site is also at risk of downstream erosion associated with meander migration down the valley.

The substrate at the site is river alluvium and the distance from the eroding area to the edge of the road shoulder is 60 feet. The highway is located on the edge of the riverine erosion hazard zone in this area, and is adjacent to an unstable hillslope of glacial sediments prone to landsliding. The site has been treated in the past with a riprap revetment, with significant repairs after floods in 1980, 1995, and 1997. Significant erosion that occurred in the winter of 2001-2002 has created an emergency situation at this site. Further erosion of the left bank upstream of the riprap revetment will potentiall damage the highway pavement, threaten driver safety, and force closure of the road. Past attempts to stabilize the site under emergency conditions have failed to provide a long-term solution and have resulted in negative impacts on aquatic and riparian resources, including salmon habitat.

FISH UTILIZATION & HABITAT AVAILABILITY

The Hoh River system supports bull trout, Chinook, chum, coho, sockeye, and steelhead. Two discrete stocks of Chinook occur in the Hoh River: spring/summer Chinook and fall Chinook. There are also two discrete stock of steelhead: winter steelhead and summer steelhead. In addition, the river also supports a small population of resident rainbow trout. The bull trout are currently listed as threatened under the federal Endangered Species Act.

RETROFIT PROJECT

The Integrated Streambank Protection Guidelines (ISPG) were used to help design the long-term solution to the continued erosion problem. By incorporating these guidelines, this project will also enhance aquatic habitat functions in the project reach by increasing channel complexity and LWD cover. It is anticipated that the outcome of the woody debris structures will result in meeting the necessary requirements to protect US 101 and provide environmental enhancements along these reaches.

Logjams and rock groins will be incorporated into the project to affect the location of the river thalweg and diffuse erosive forces on the outside of the meander bend. Logjam structures will be placed upstream of the problem site. These deflector and apex bar structures will push and divide the flow onto the large gravel bar that is opposite of the

riprap revetment. This will reduce pressure on the left bank.

Several L-shaped vegetated rock groin structures with woody debris integrated within and upstream of each structure will also be incorporated into the project. Each structure will be backfilled to create a riparian buffer between the road and the river, and the stabilized areas will be re-vegetated with a mixed community of native deciduous and coniferous trees. A series of these structures promote creation of a continuous length of reinforced riparian area.

Both the log jams structures and the rock groins will be topped with a platform of small logs and 6-8 inches of topsoil. These will then be planted with native tree and shrub species, therefore providing additional habitat.